

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### PPG

#### Nevada Industry Excellence

#### PPG Plus Total Productive Maintenance Equals Productivity

##### Client Profile:

PPG Industries, founded in 1883 in Pittsburgh, Pennsylvania is a global supplier of coatings, glass and chemicals. The Nevada plant began operations in 2008 and manufactures architectural coating products for commercial and residential use under the brand names Pittsburgh Paint and Olympic. The company employs 28 people at its facility in McCarran, Nevada.

##### Situation:

When PPG's new plant opened in Nevada in 2008, few staff members had experience with automated packaging lines. The plant's equipment included a newly-designed system for filling five-gallon paint containers. With significant downtime and reduced output, the line was operating at less than 50 percent of designed capacity. The company's line operators and maintenance staff were in constant firefighting mode, and operating issues required that the line be staffed with a crew twice the designed size. Plant Manager Terry McGinnis recognized that a systematic approach involving operations, maintenance, and plant leadership was going to be the key to stabilizing and optimizing line operation. McGinnis had previously managed the PPG manufacturing facility in Dover, Delaware where he benefitted from collaboration with the Delaware Manufacturing Extension Partnership (Delaware MEP), a NIST MEP network affiliate. He believed that the Total Productive Maintenance (TPM) concept where the machine operator and other team members are involved in keeping the equipment in good working order was the appropriate tool for the five-gallon line and approached Nevada Industry Excellence (formerly the Nevada Management Assistance Partnership), a NIST MEP network affiliate, for help.

##### Solution:

Nevada Industry Excellence and PPG assembled a project team under the direction of Tom Fabrizio of Lean Manufacturing Tools, LLC and Nevada Industry Excellence Project Manager David Steiger. The team conducted a three-day TPM project launch. After the team became familiar with the key elements of a successful TPM program, they conducted a capacity analysis focusing on each aspect of the line. This analysis was the key starting point for understanding the situation and building a set of priorities that were accepted by production, maintenance, and plant leadership. Once priorities were identified, it was time to assign responsibilities, create timelines, and begin to take corrective action. Those items that could be immediately addressed were handled first and action plans were developed for longer term items. The benefits of inter-department collaboration became apparent. Within three days PPG had a detailed plan for bringing the five-gallon fill line up to designed output level. It was a plan already in the first stages of enactment, and early benefits were beginning to show. With Nevada Industry Excellence's assistance, the line stabilized and productivity improved. Recent data shows that PPG's five-gallon fill rate is the highest in the company. Reno Production Manager Mike Boyd said, "What impressed me is that we were able to double our line output with fewer people. We saw improvement in our package appearance and quality. The success allowed us to increase our West Coast

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production which delivered real cost savings for the business."

#### **Results:**

\* Increased productivity by 100 percent.

#### **Testimonial:**

"I was always confident we had the skills and capability to solve the problems we needed to solve. What we lacked was the experience of using a disciplined quality process like TPM. Using that tool in a team-based approach with Nevada Industry Excellence's leadership, we achieved results that exceeded the team's expectations."

Terry McGinnis, Reno Plant Manager